

# **AMENDMENTS TO THE CLAIMS**

Please amend the claims as indicated hereafter.

## **Claims:**

1. (Currently Amended) A medical device for treating a pathology in a portion of the body of a living organism, comprising, at least one conductive layer of conductive material, wherein the at least one conductive layer ~~conductive material~~ comprises a resistance less than about 1000 ohms/cm<sup>2</sup>;  
~~wherein the conductive material is at least partially composed of and a~~ biologically inert polymer which is at least partially coated with a metal or a metal alloy; and  
~~wherein no external energy source or galvanic cell action is required to alter an electrodynamic process of a portion of the body of a living organism~~ the medical device is configured to passively alter the pathology's electrical potential when the at least one conductive layer is positioned to conductively bridge healthy surfaces surrounding the pathology.

2. (Previously Cancelled)

3. (Previously Amended) The medical device of Claim 1, wherein the polymer is nylon, polyethylene, polypropylene, wool, silk, cotton, or elastomers.

4. (Previously Amended) The medical device of Claim 1, wherein the metal is selected from the group consisting of silver, gold aluminum, nickel, tin, stainless steel, copper, and combinations thereof, and the metal alloy is selected from the group consisting of aluminum-copper, aluminum-magnesium, copper-gold, copper-nickel, copper-palladium, gold-palladium, gold-silver, iron-nickel and silver-palladium, and combinations thereof.

5. (Original) The medical device of Claim 1, wherein the medical device is a wound dressing.

6. (Original) The medical device of Claim 1, wherein the medical device is an orthotic appliance.

7. (Original) The medical device of Claim 1, wherein the medical device is a dental appliance.

8. (Original) The medical device of Claim 5, wherein the wound dressing is shaped for a use around external fixture pin structures.

9. (Original) The medical device of Claim 5, wherein the wound dressing is shaped for a use around ostomy sites.

10. (Original) The medical device of Claim 5, wherein the wound dressing is shaped for a use around tracheostomy sites.

11. (Original) The medical device of Claim 5, wherein the wound dressing is shaped for a use around catheter sites.

12. (Original) The medical device of Claim 5, wherein the wound dressing is shaped for packing body cavities.

13. (Original) The medical device of Claim 1, wherein the device has a tubular shape.

14. (Original) The medical device of Claim 13, wherein the tubular shape is incorporated into a wound drain.

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15. (Previously Amended) A medical device, comprising,
  - a) a wound dressing comprising more than two layers of a fibrous material;  
wherein the material contains nonmetalized fibers and fibers that are at least partially coated with a metallic material to yield metalized fibers, each layer being joined to an adjacent layer and having a ratio of metalized fibers to nonmetalized fibers; and
  - b) an appliance, wherein the wound dressing is incorporated into the appliance such that the layers of the wound dressing form a gradient of metalized fiber to nonmetalized fiber ratios, the highest ratio layer capable of being placed in contact with a wound site.
16. (Original) The medical device of Claim 15, wherein the appliance is shaped for a use selected from the group consisting of orthopedic, dental, catheter, packing a body cavity, an ostomy site, a tracheostomy site, and around external fixture pin structures.
17. (Original) The medical device of Claim 15 wherein the appliance has a tubular shape.
18. (Previously Amended) The medical device of Claim 17 wherein the appliance is a wound drain.

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19. (Currently Amended) A method for treating a portion of the body of a living organism, comprising,

a) applying a medical device to a pathology of a portion of the body of a living organism, wherein the medical device comprises at least one layer of conductive material;

wherein the conductive material comprises a resistance less than about 1000 ohms/cm<sup>2</sup>;

wherein the conductive material is at least partially composed of a biologically inert polymer which is at least partially coated with a metal or metal alloy; and

wherein no external energy source or galvanic cell action is required to alter an electrodynamic process of a portion of the body of a living organism;

b) altering the electric parameters of the portion of the body without using an external energy source or galvanic cell action; and

c) ~~lowering~~ altering the electrical potential resistance and ~~increasing the current of~~ the portion of the pathology body by conductively bridging healthy body surfaces surrounding the pathology.

20. (Previously Cancelled)

21. (Previously Cancelled)

22. (Previously Cancelled)

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23. (New) A medical device comprising:  
a conductive layer comprising a biologically inert polymer and a conductor,  
wherein said medical device induces a shift in lateral electrical potential when in contact with a  
pathology.
24. (New) The medical device of claim 23, wherein said shift in lateral electrical  
potential is deeper into said body.
25. (New) The medical device of claim 23, wherein said shift in lateral electrical  
potential induces an analgesic effect.
26. (New) The medical device of claim 23, wherein said shift in lateral electrical  
potential stimulates healing.
27. (New) The medical device of claim 23, further comprising a moisture retaining  
layer.
28. (New) The medical device of claim 23, wherein said conductive layer comprises  
a metal.
29. (New) The medical device of claim 28, wherein said metal comprises silver.
30. (New) The medical device of claim 23, wherein the conductive layer comprises a  
surface resistance of less than about 1000 ohms/cm<sup>2</sup>.

31. (New) A medical device comprising:

at least one layer of conductive material having a surface resistance less than about 1000 ohms/cm<sup>2</sup>, wherein said at least one layer of conductive material comprises a biologically inert polymer and a conductor; and wherein said medical device induces an analgesic effect by shifting a pathology's lateral electrical potential when applied to the pathology.

32. (New) A medical device comprising:

at least one layer of conductive material comprising at least two plies of a conductor, wherein the at least one layer of conductive material has a surface resistance less than about 1000 ohms/cm<sup>2</sup>, and wherein at least one of said at least two plies of a conductor comprises a biologically inert polymer.

33. (New) The medical device of claim 33, wherein said medical device passively shifts a pathology's lateral electrical potential when in conductive contact with the pathology.

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